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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,891

08/28/2006

Martin Vorbach

2885/96

3388

26646

7590

08/07/2009

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EXAMINER

VICARY, KEITH E

ART UNIT

PAPER NUMBER

2183

MAIL DATE

DELIVERY MODE

08/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,891	Applicant(s) VORBACH, MARTIN	
	Examiner Keith Vicary	Art Unit 2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :3/18/2009, 3/23/2009, 3/23/2009, 3/26/2009, 4/21/2009, 4/30/2009.

DETAILED ACTION

1. Claims 5-11 are pending in this office action and presented for examination. Claim 5 has been previously amended, and claims 7-11 are newly added by amendment filed 6/5/2009.

Claim Objections

2. Claim 10 is objected to because of the following informalities. Appropriate correction is required.
 - a. Claim 10, last line, recites "occurs" which should presumably be "occur".

Drawings

3. The drawings were received on 6/5/2009. These drawings are acceptable.

Double Patenting

4. Claims 5-11 of this application conflict with claim 15 of Application No. 10501845. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

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5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claim 5-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 15 of copending Application No. 10501845. Although the conflicting claims are not identical, they are not patentably distinct from each other because each of these claims in the instant application has a corresponding claim in the '845 application which contains all elements of the instant claim. (*In re Goodman* 29 USPQ2d 2010 (Fed. Cir. 1993). The reasoning for this rejection is explained below.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

7. Claim 15 (as dependent on claim 7) of the '845 application discloses the limitations "determining, for each configuration, a respective maximum allowed execution runtime prior to lapse of which the respective configuration is uninterruptible...for each configuration, monitoring the respective maximum allowed execution runtime in order to interrupt the configuration if the respective maximum allowed execution runtime is exceeded...wherein a watchdog is used to recognize an exceedance of each respective maximum allowed execution runtime." These limitations effectively correlate to the use of the Borkenhagen, Smith, and Frazier arts in the rejections below, as Borkenhagen was used to teach of a respective maximum allowed execution runtime for a thread, Smith was used to teach of the use of configurations, and Frazier was used to teach of a watchdog. However, it is also noted that Borkenhagen explicitly teaches of the concept of continuing to execute a thread if no other threads are available to run (e.g. col. 15, lines 6-7). Consequently:

b. Claims 5 and 8-11 are obvious in view of claim 15 of the '845 application (the specific limitations of which are cited above) in further view of Borkenhagen, which teaches of the concept of continuing to execute a thread if no other threads are available to run (e.g. col. 15, lines 6-7). Note that it would have been obvious to one of ordinary skill in the art at the time of the invention to combine this teaching of Borkenhagen with the invention of claim 15 of the '845 application in order to increase system performance.

- c. Claim 6 is obvious in view of Borkenhagen using the citation and motivation cited immediately above, and Parhami using the citation and motivation given in the 103 rejection below.
- d. Claim 7 is obvious in view of Borkenhagen using the citation and motivation cited immediately above, and Rubinstein using the citation and motivation given in the 103 rejection below.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

9. Claims 5-8 and 10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
10. Claim 5 recites the limitation “increasing, by a configuration, the first configuration’s maximum allowed runtime” in line 5. However, the original disclosure does not appear to disclose that “a configuration,” which can include other configurations besides the first configuration, is able to increase the first configuration’s maximum allowed runtime. Note that claims 6 and 7 recite of “the configuration” as well

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and may be subject to a future antecedent basis issue depending on if/how the claim is amended.

11. Claim 5 recites the limitation “the increased maximum allowed runtime expiring if the first configuration, in a non-error operation...” in the third to last line. The original disclosure does not explicitly disclose of a “non-error” or an “error” operation, and the absence of an “error” operation disclosure does not necessarily mean that the remaining limitations of the claim are done in a non-error context.

e. Claims 6-7 are rejected for failing to alleviate the rejection of claim 5 above.

12. Claim 7 recites the limitation “determining whether a processing of the interrupt requires handling within the maximum allowed runtime...” in lines 2-3. However, the original disclosure does not appear to disclose of this step. In other words, page 19, lines 19-25 of the original disclosure appears to disclose of the concept of reserving a resource for processing interrupts quickly, but does not disclose of actually determining this (i.e. dynamically) such that interrupts can either be sent, or not sent, to the separate unit.

13. Claim 7 recites the limitation “a component reserved for handling of interrupts requiring immediate handling” in line 5. However, the original disclosure does not appear to disclose of interrupts require immediate handling, as opposed to interrupts which must be processed quickly.

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14. Claim 8 recites the limitation “determining by the configuration whether extension of the maximum allowed runtime is usable by the configuration...responsive to a positive determination in the determining step...” in lines 4-5. However, the original disclosure does not appear to disclose of a configuration determining whether extension of the maximum allowed runtime is usable by the configuration.

15. Claim 10 recites the limitation “in a non-error operation for a task switch” in line 8. The original disclosure does not explicitly disclose of a “non-error” or an “error” operation, and the absence of an “error” operation disclosure does not necessarily mean that the remaining limitations of the claim are done in a non-error context.

16. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

17. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

18. Claim 9 recites the limitation “the maximum allowed runtime” in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. Claims 5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen et al. (Borkenhagen) (US 6076157) in view of Smith et al. (Smith) (US 6658564 B1).

21. Consider claim 5, Borkenhagen discloses processing in accordance with a first thread having a maximum allowed runtime (col. 14, line 51-54, thread switch time-out register and value; a thread will perform processing before time-out occurs, this time period as initially indicated by the time-out value is the maximum allowed runtime); increasing, by a thread, the first thread's maximum allowed runtime (col. 14, lines 48-51, a thread switch occurs after some time if no useful processing is being accomplished to prevent the system from hanging; also see col. 20, lines 50-51 regarding useful processing; therefore, if useful processing is being accomplished, the maximum allowed runtime increases); if an interrupt occurs, suppressing the increase in response to the interrupt (col. 22, lines 4-6, thread is unable to perform useful processing when an inactive thread is waiting to service an interrupt within a limited period of time); and if no interrupt occurs, executing a second thread in response to expiry of the increase maximum allowed runtime, the increased maximum allowed runtime expiring if the first thread, in a non-error operation and for at least one of a task switch and a thread

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switch, does not further increase the maximum allowed runtime (col. 14, lines 48-50, force a thread switch to the dormant thread after some time if no useful processing is being accomplished to prevent the system from hanging).

However, Borkenhagen does not disclose that the thread is a configuration, and switching threads involves reconfiguring a reconfigurable unit.

On the other hand, Smith discloses of a thread which is a configuration, and where switching threads involves reconfiguring a reconfigurable unit (col. 2, line 25-29, which discloses of threads correlating to software functions and configurations correlating to hardware functions; col. 1, line 55, discloses of the reconfigurable logic aspect).

Smith's teaching of using configurations results in greater system performance and speed (Smith, col. 1, lines 24-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Smith with the invention of Borkenhagen in order to result in greater system performance and speed.

22. Consider claim 8, Borkenhagen discloses processing in accordance with a thread having a maximum allowed runtime (col. 14, line 51-54, thread switch time-out register and value; a thread will perform processing before time-out occurs, this time period as initially indicated by the time-out value is the maximum allowed runtime); determining by the thread whether extension of the maximum allowed runtime is usable by the thread (col. 14, lines 48-51, a thread switch occurs after some time if no useful processing is

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being accomplished to prevent the system from hanging; also see col. 20, lines 50-51 regarding useful processing; therefore, if useful processing is being accomplished, the maximum allowed runtime increases); responsive to a positive determination in the determining step, triggering an increase, by the thread, of the thread's maximum allowed runtime (col. 14, lines 48-51, a thread switch occurs after some time if no useful processing is being accomplished to prevent the system from hanging; also see col. 20, lines 50-51 regarding useful processing; therefore, if useful processing is being accomplished, the maximum allowed runtime increases); and suppressing the increase in response to an interrupt (col. 22, lines 4-6, thread is unable to perform useful processing when an inactive thread is waiting to service an interrupt within a limited period of time).

However, Borkenhagen does not disclose that the thread is a configuration.

On the other hand, Smith discloses of a thread which is a configuration, and where switching threads involves reconfiguring a reconfigurable unit (col. 2, line 25-29, which discloses of threads correlating to software functions and configurations correlating to hardware functions; col. 1, line 55, discloses of the reconfigurable logic aspect).

Smith's teaching of using configurations results in greater system performance and speed (Smith, col. 1, lines 24-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Smith with the invention of Borkenhagen in order to result in greater system performance and speed.

23. Consider claim 9, Borkenhagen discloses increasing, by a thread, the thread's maximum allowed runtime (col. 14, lines 48-51, a thread switch occurs after some time if no useful processing is being accomplished to prevent the system from hanging; also see col. 20, lines 50-51 regarding useful processing; therefore, if useful processing is being accomplished, the maximum allowed runtime increases); suppressing the increase in response to an interrupt (col. 22, lines 4-6, thread is unable to perform useful processing when an inactive thread is waiting to service an interrupt within a limited period of time); and executing a procedure for handling the interrupt responsive to expiry of the maximum allowed runtime (col. 14, line 46, describing the servicing of an interrupt after a delay).

However, Borkenhagen does not disclose that the thread is a configuration, and switching threads involves reconfiguring a reconfigurable unit.

On the other hand, Smith discloses of a thread which is a configuration, and where switching threads involves reconfiguring a reconfigurable unit (col. 2, line 25-29, which discloses of threads correlating to software functions and configurations correlating to hardware functions; col. 1, line 55, discloses of the reconfigurable logic aspect).

Smith's teaching of using configurations results in greater system performance and speed (Smith, col. 1, lines 24-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Smith with the invention of Borkenhagen in order to result in greater system performance and speed.

24. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen and Smith as applied to claim 5 above, and further in view of Frazier et al. (Frazier) (US 6665758 B1) and Parhami (Parallel Counters for Signed Binary Signals).

25. Consider claim 6, Borkenhagen and Smith do not disclose that the configuration triggers a parallel counter to perform the increasing.

On the other hand, Frazier discloses of using a watchdog timer, a counter used in a specific way, to detect when no useful work is being done (col. 1, lines 15-19, explaining watchdog timers).

Frazier's teaching detects when no useful work is being done in a simple way (Frazier, col. 1, line 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Frazier with the invention of Borkenhagen and Smith in order to detect when no useful work is being done in a simple way.

However, Borkenhagen, Smith, and Frazier do not disclose that the counter is a parallel counter.

On the other hand, Parhami discloses of a parallel counter (section 1, second paragraph, first line, parallel counter).

Parhami's teaching of a parallel counter achieves higher speeds than regular counters (section 1, first paragraph, last two lines).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Parhami with the invention of Borkenhagen, Smith, and Frazier, in order to achieve higher speeds.

26. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen and Smith as applied to claim 5 above, and further in view of Frazier.

27. Consider claim 10, Borkenhagen discloses processing in accordance with a first thread having a maximum allowed runtime (col. 14, line 51-54, thread switch time-out register and value; a thread will perform processing before time-out occurs, this time period as initially indicated by the time-out value is the maximum allowed runtime); and if an interrupt does not occur, the first thread increasing the maximum allowed runtime (col. 14, lines 48-51, a thread switch occurs after some time if no useful processing is being accomplished to prevent the system from hanging; also see col. 20, lines 50-51 regarding useful processing; therefore, if useful processing is being accomplished, the maximum allowed runtime increases); subsequent to the increase in maximum allowed runtime, and in a non-error operation for a task switch, running to the increased maximum allowed runtime without a retriggering of an increase in maximum allowed runtime by the first thread; and responsive to the reaching of the increased maximum

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allowed runtime, performing one of a task switch and a thread switch by switching threads (col. 14, lines 48-50, force a thread switch to the dormant thread after some time if no useful processing is being accomplished to prevent the system from hanging); wherein if an interrupt does occur, the maximum allowed runtime is not increased (col. 22, lines 4-6, thread is unable to perform useful processing when an inactive thread is waiting to service an interrupt within a limited period of time).

However, Borkenhagen does not disclose that the thread is a configuration, and switching threads involves reconfiguring a reconfigurable unit. Borkenhagen also does not disclose of using a counter and a counter reset.

On the other hand, Smith discloses of a thread which is a configuration, and where switching threads involves reconfiguring a reconfigurable unit (col. 2, line 25-29, which discloses of threads correlating to software functions and configurations correlating to hardware functions; col. 1, line 55, discloses of the reconfigurable logic aspect).

Smith's teaching of using configurations results in greater system performance and speed (Smith, col. 1, lines 24-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Smith with the invention of Borkenhagen in order to result in greater system performance and speed.

However, Borkenhagen and Smith do not disclose of using a counter and a counter reset.

On the other hand, Frazier discloses of using a watchdog timer, a counter which is reset, to detect when no useful work is being done (col. 1, lines 15-19, explaining watchdog timers).

Frazier's teaching detects when no useful work is being done in a simple way (Frazier, col. 1, line 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Frazier with the invention of Borkenhagen and Smith in order to detect when no useful work is being done in a simple way.

28. Consider claim 11, Borkenhagen discloses a thread having a maximum allowed runtime (col. 14, line 51-54, thread switch time-out register and value; a thread will perform processing before time-out occurs, this time period as initially indicated by the time-out value is the maximum allowed runtime); wherein the thread is adapted to increase its maximum allowed runtime conditional at least upon that an interrupt is not detected and processing is to continue without a thread switch and without a task switch (col. 14, lines 48-51, a thread switch occurs after some time if no useful processing is being accomplished to prevent the system from hanging; also see col. 20, lines 50-51 regarding useful processing; therefore, if useful processing is being accomplished, the maximum allowed runtime increases).

However, Borkenhagen does not disclose that the thread is a configuration. Borkenhagen also does not disclose of using a counter and a counter reset.

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On the other hand, Smith discloses of a thread which is a configuration, and where switching threads involves reconfiguring a reconfigurable unit (col. 2, line 25-29, which discloses of threads correlating to software functions and configurations correlating to hardware functions; col. 1, line 55, discloses of the reconfigurable logic aspect).

Smith's teaching of using configurations results in greater system performance and speed (Smith, col. 1, lines 24-42).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Smith with the invention of Borkenhagen in order to result in greater system performance and speed.

However, Borkenhagen and Smith do not disclose of using a counter and a counter reset.

On the other hand, Frazier discloses of using a watchdog timer, a counter which is reset, to detect when no useful work is being done (col. 1, lines 15-19, explaining watchdog timers).

Frazier's teaching detects when no useful work is being done in a simple way (Frazier, col. 1, line 19).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Frazier with the invention of Borkenhagen and Smith in order to detect when no useful work is being done in a simple way.

29. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen and Smith as applied to claim 5 above, and further in view of Rubinstein et al. (Rubinstein) (US 4959781).

30. Consider claim 7, Smith discloses of determining whether a processing of the interrupt requires handling within the maximum allowed runtime (col. 8, lines 14-15, detecting a high priority function such as a real-time interrupt handling process).

However, neither Borkenhagen nor Smith disclose that, responsive to this determination, the interrupt is handled on a component reserved for handling of interrupts requiring immediate handling and on which the configuration is not run.

On the other hand, Rubinstein discloses of handling interrupts on a component reserved for handling of interrupts on which the configuration is not run (col. 1, lines 21-24, interrupts are assigned to the idle processor with preloaded interrupt handling code).

Rubinstein's teaching enables fast interrupt response in an efficient manner (Rubinstein, col. 2, lines 21-22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teaching of Rubinstein with the invention of Borkenhagen and Smith in order to enable for fast interrupt response in an efficient manner for the interrupts which require fast interrupt response.

Response to Arguments

31. Applicant argues that the amended limitations and new claims overcome the previous prior art references. This argument is persuasive, and examiner has brought in new references to account for these amended limitations and new claims, as detailed in the 103 rejection above.

Conclusion

32. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Vicary whose telephone number is (571)270-1314.

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The examiner can normally be reached on Monday - Thursday, 7:00 a.m. - 5:30 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Chan can be reached on 571-272-4162. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eddie P Chan/
Supervisory Patent Examiner, Art Unit 2183

/Keith Vicary/
Examiner, Art Unit 2183